

L125(h-4)

ACCESSION NO: AP6010708

ENCLOSURE: 1

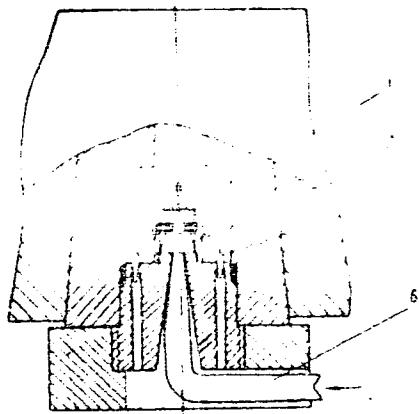


FIG. 1. PUMP OR VALVE ASSEMBLY

LL  
Card 3/3

MESHMAN, M.D.; MUSHIMSKIY, Ye.D.; TIKHOMIROVA, N.I.

Treatment of trichocephaliasis by diathermy. Med.paraz. i paraz.  
(MIRA 11:4)  
bol. 27 no.1:111 Ja-F '58.

1. Iz parazitologicheskogo otdela Simferopol'skoy gorodskoy sanitarno-  
epidemiologicheskoy stantsii.  
(NEMATODA) (DIATHERMY)

TIKHOMIROVA, N.I.

KOROLEV, P.A.; MARKOV, T.L.; TIKHOMIROVA, N.I.

Result of eradication of an endemic focus of pappataci fever. Med.  
paraz. i paraz. bol. no.4:344-347 O-D '54. (MLRA 8:2)

1. Iz Simferopol'skoy protivomalyariynoy stantsii (glavnyy vrach  
N.I.Tikhomirova) i kafedry infektsionnykh bolezney i epidemiologii  
(zav. prof. V.M.Domrachev) Krymskogo meditsinskogo instituta imeni  
I.V.Stalina.

(PAPPATACI FEVER, prevention and control,  
in Russia, liquidation of endemic focus with DDT & benzine  
hexachloride)

(DDT,  
pappataci fever control)  
(BENZINE HEXACHLORIDE,  
pappataci fever control)

TIKHOMIROVA, N. I.

TIKHOMIROVA, N. I.: "The principles of compiling a textbook on French vocabulary for the first course in foreign-language pedagogical institutes". Moscow, 1955. Min Higher Education USSR. First Moscow State Pedagogical Inst of Foreign Languages. (Dissertations for the Degree of Candidate of Pedagogical Sciences.)

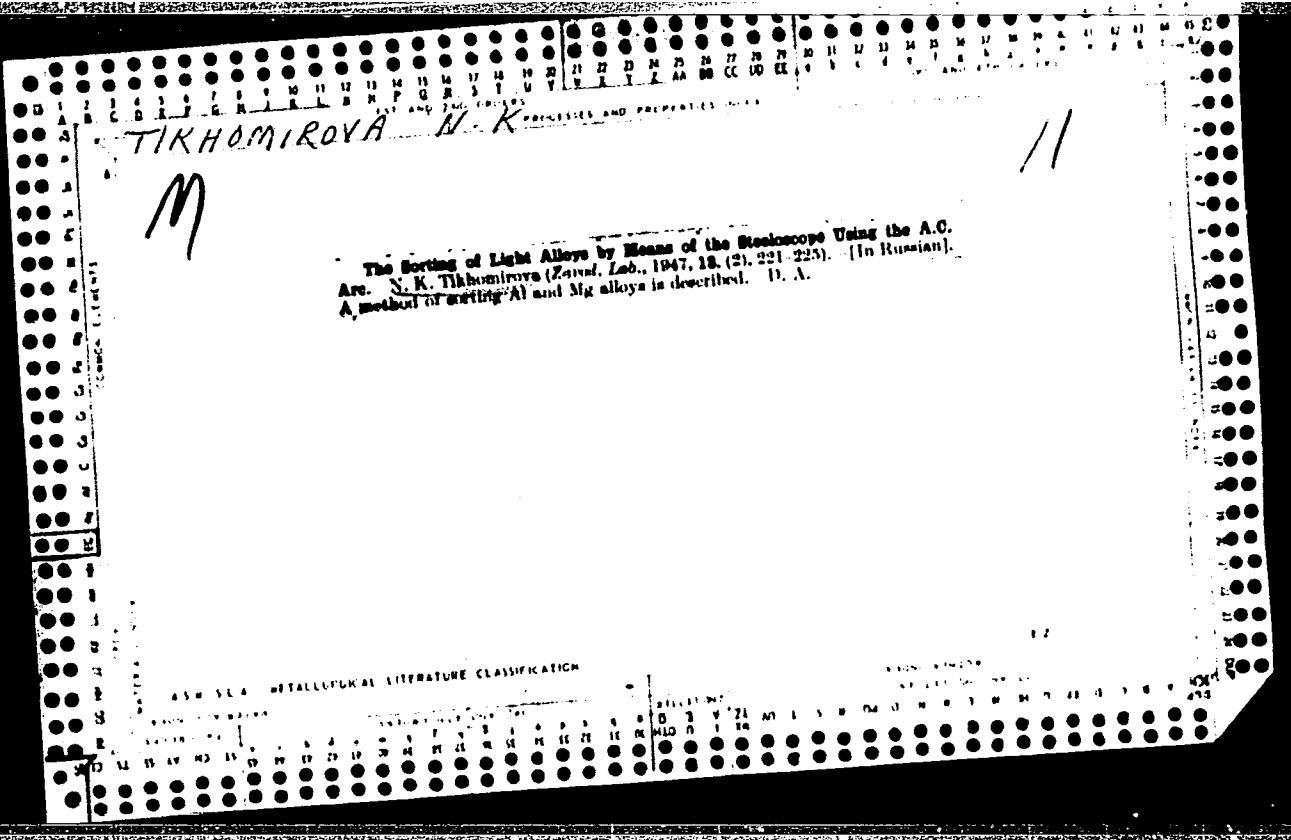
SO: Knizhnaya Letopis' No. 50. 10 December 1955. Moscow.

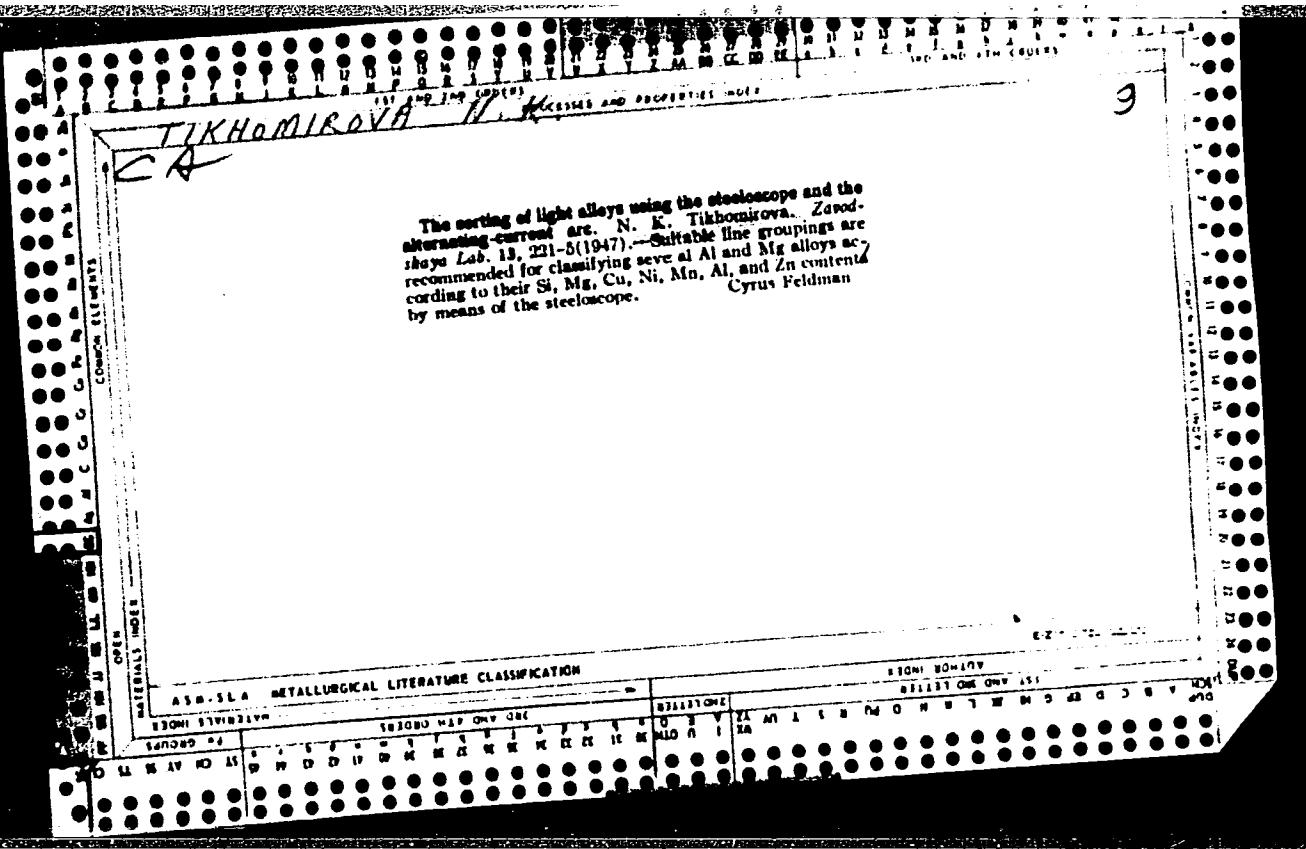
TIKHOMIROVA, N.I., meditsinskaya sestra (Ul'yanovskaya oblast')

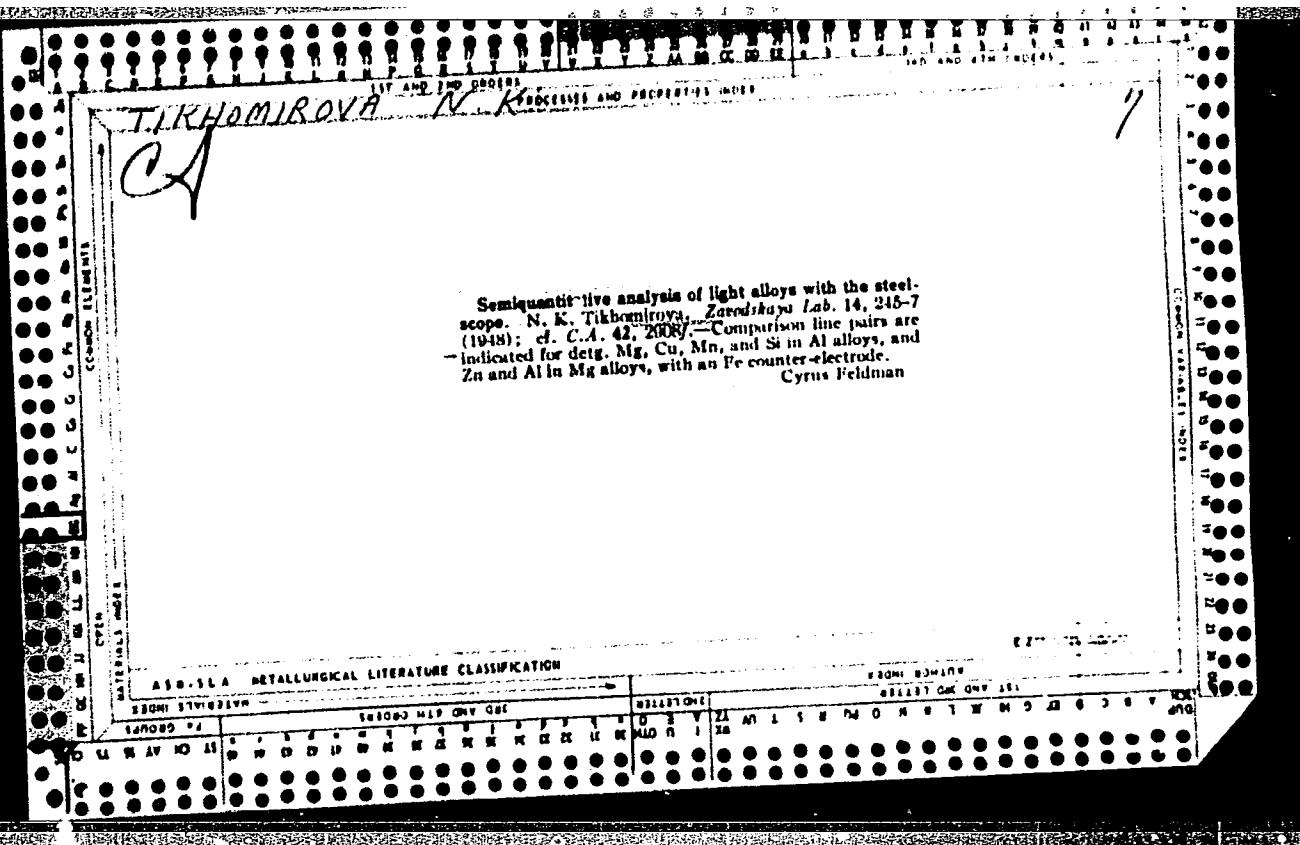
Sharing our experience. Med.sestra 16 no.5:32 My '57. (MLR 10:7)  
(NURSES AND NURSING--STUDY AND TEACHING)

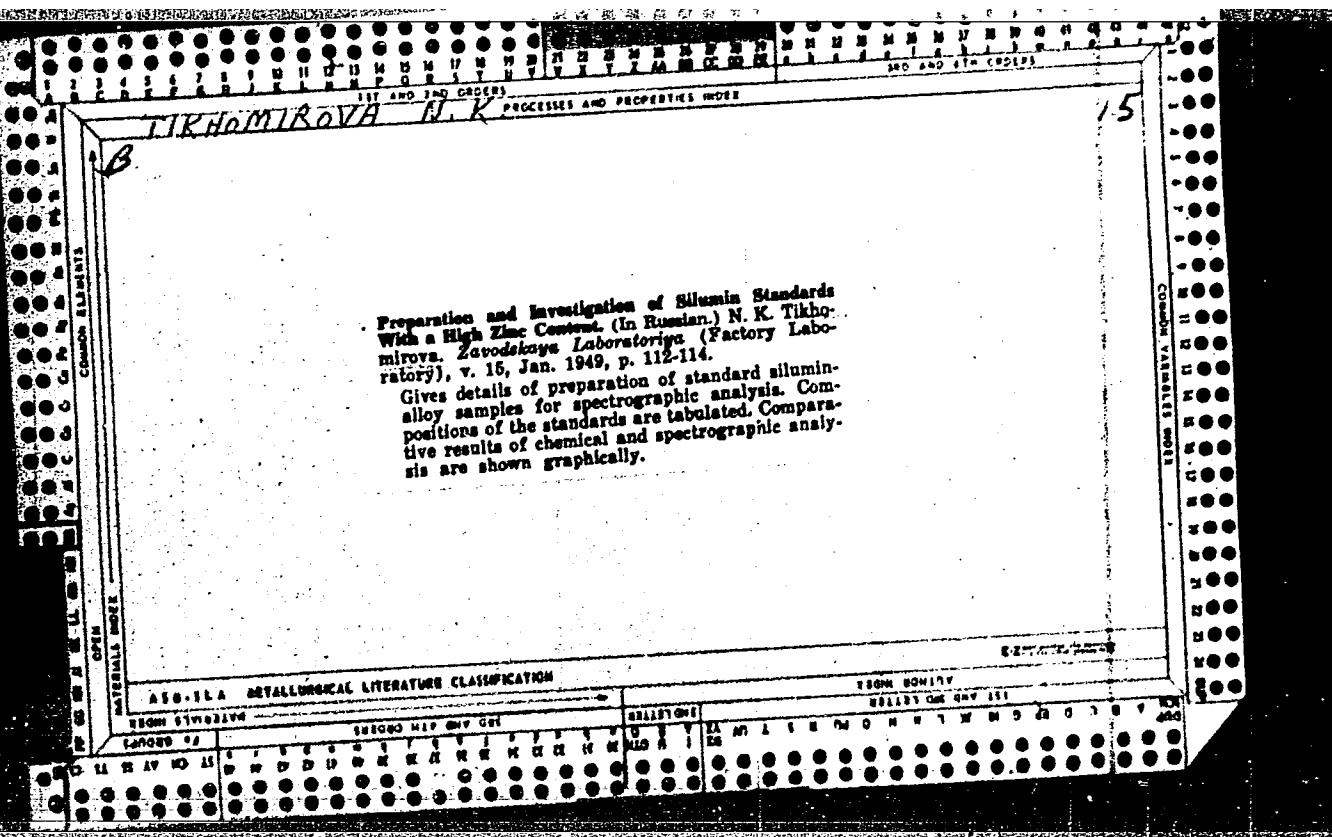
TIKHOMIROVA, N.I.

Vein rocks in the Turgoyak massif of the Southern Urals. Biul.  
MOIP. Otd. geol. 34 no.6:140-141 N-D '59. (MIRA 14:3)  
(Ural Mountains—Minerals)









TIKHOMIROVA, N. N.

"Determination of the Velocity Constants of the Reaction of Hydrogen Atoms with Hydrocarbons at Increased Temperatures," dissertation - 9 March 1951, at Moscow State University.

CA

Rearrangement of free alkyl radicals. N. N. Tikhomirova and V. V. Vorovskii (Moscow State Univ.). Doklady Akad. Nauk S.S.R. 79, 989-9 (1951).—On the assumption (Bolland, C.A. 44, 9785; Steiner and Watson, C.A. 43, 2270x) that the rate of free-radical exchange reactions of the type  $R_1\cdot + R_2R_3 \rightarrow R_1R_2 + R_3\cdot$  is detd. primarily by the

activation energy  $K$ , and on the basis of data of  $K$  (Trifman-Dickenson and Steele, J. Chem. Phys. 19, 359 (1941); C.A. 44, 28314) for the series  $\cdot\text{CH}_3 + (\text{C}_2\text{H}_5\text{Me}; \text{Me}_2\text{C}_2\text{H}_5; \text{C}_2\text{H}_5\text{Cl}; \text{C}_2\text{H}_5\text{Br}; \text{C}_2\text{H}_5\text{I}; \text{iso-C}_3\text{H}_8; \text{MeCHCHMe}; \text{MeCHCHMeCH}_2\text{Me}) \rightarrow \text{CH}_3 + (\text{Et}\cdot; \text{MeC}_2\text{H}_5\cdot; \text{MeCHCHMe}; \text{EtCH}_2\text{Me}; \text{Et}_2\text{CH}; \text{PrCH}_2\text{Et}; \text{Me}_2\text{C}; \text{MeCH}_2\text{Me}; \text{MeHCCMeCH}_2\text{Me}, \text{or MeCHCHMeCH}_2\text{Me})$  ( $\beta = 10.4 \pm 0.2, 10.0, 9.5, 8.2, 8.1, 7.6, 6.9-7.8, 7.9$ ), it can be concluded that the reactivity increases with increasing complexity of the mol.  $R_2R_3$ ; the same applies to the rates of reactions between H atoms and aliphatic hydrocarbons. The reverse order is found for reactions between one given mol. and different radicals. These facts suggest the general rule that the greater the reactivity of the reactants, the less active are the products, or, in other words, the greater is its velocity. This formulation is analogous to Evans and Polanyi's (C.A. 22, 2813<sup>a</sup>) linear relation  $E = A - \alpha\Delta H$  between the activation energy  $E$  and the heat  $\Delta H$  of reactions between alkali metals and alkyl halides. For the above free-radical exchange reactions, this relation could be tested with the aid of V.'s method of estn. of bond energies (cf. preceding abstr.) which gives  $\Delta H$  with an accuracy of 1-2 kcal./mole. For the forward reaction,  $E$  proves actually to decrease, and for the back reaction to increase

linearly with increasing  $\Delta H$ . From these plots,  $A = 11.5$  kcal./mole; this corresponds to the activation energy of the exchange  $\cdot\text{CH}_3 + \text{C}_2\text{H}_5 \rightarrow \text{CH}_3\cdot + \text{C}_2\text{H}_5$ , which could not be detd. directly. The activation energies of  $\cdot\text{CH}_3 + (\text{CH}_3)_2\text{C} \rightarrow \text{CH}_3\cdot + (\text{CH}_3)_2\text{C}$ , and  $\text{C}_2\text{H}_5 + \text{C}_2\text{H}_5 \rightarrow \text{CH}_3\cdot + \text{C}_2\text{H}_5$ , are approx. equal, as their  $\Delta H$  is approx. equal. Activation energies  $K$  (and  $\Delta H$ , in parentheses) for a series of radical exchange reactions  $\text{R}_1\cdot + \text{R}_2\text{R}_3 \rightarrow \text{R}_1\text{R}_2 + \text{R}_3\cdot$  are calcd. and tabulated:

	$\text{CH}_3\cdot$	$\text{MeCH}_2\cdot$	$\text{EtCH}_2\text{Me}\cdot$
Mell	11.5 (0)	15.0 (-5)	16.5 (-7)
BtH	10.0 (+5)	14.8 (0)	16.2 (-2)
Prlf	9.5 (+7)	14.2 (+2)	15.5 (0)
Bulf	9.3 (+3)	13.9 (+3)	15.3 (+1)
Me <sub>2</sub> CH <sub>2</sub>	8.7 (+10)	13.3 (+5)	14.5 (+3)
EtMeCH <sub>2</sub>	8.2 (+12)	12.7 (+7)	14.1 (+4)
Me <sub>2</sub> CH	7.7 (+15)	11.6 (+10)	13.4 (+8)

The factors  $\alpha$  are const. within each series;  $\alpha = 0.73$  for the endothermal reactions ( $\Delta H > 0$ ) and  $\alpha = 0.27$  for exothermal reactions ( $\Delta H < 0$ ). This constancy of  $\alpha$  rests on the singleness of type of reaction; all these reactions involve the passage of a H atom from one C atom to another. On the other hand,  $\alpha$  is different in the series  $\text{H} + \text{RH} \rightarrow \text{H}_2 + \text{R}$ , where the H atom passes from C to the H atom. Thus,  $\alpha$  is characteristic of the type of the elementary act, whereas  $A$  is characteristic of the given series.

N. Thon

TIKHOMIROVA, N. N. and VOYEVODSKIY, V. V.

"Determination of the Velocity Constants of the Reaction of Hydrogen Atoms with Hydrocarbons at Increased Temperatures," from the book Chain Reactions of Oxidation of Hydrocarbons innthe Gas Phase, USSR Acad. Sci., Moscow, pp. 172-186,  
1955

Translation 1071268

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CIA-RDP86-00513R001755610014-1

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T. I. C. R. A. M.

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755610014-1"

5(4)

AUTHORS:

Tikhomirova, N. N., Lukin, B. V., Razumova, L. I.,  
Voyevodskiy, V. V., Corresponding Member, Academy of Sciences,  
USSR

SOV/20-122-2-27/42

TITLE:

Using Electron Paramagnetic Resonance and Roentgenography in  
Studying the Structure of the Carbonization Products Obtained  
From Carbon-Containing Substances

(Issledovaniye stroyeniya produktov karbonizatsii  
uglerodsoderzhashchikh veshchestv metodom elektronnogo para-  
magnitnogo rezonansa i rentgenografii)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 2, pp 264-266  
(USSR)

ABSTRACT:

The method of paramagnetic electron resonance permits im-  
mediate detection of free radicals in the investigated system  
and a measurement of their concentration. In order to find  
the possibilities which are given by the investigation of  
the structure of carbonized substances by the  
method of paramagnetic electron resonance (and simultaneous-  
ly by radiography), the authors investigated the structural  
variations caused by the carbonization of polyvinyl chloride

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SOV/2o-122-2-27/42

Using Electron Paramagnetic Resonance and Roentgenography in Studying the  
Structure of the Carbonization Products Obtained From Carbon-Containing  
Substances

and polyvinylidenechloride. The carbonization was carried out in an inert atmosphere in the temperature interval of 350-700°C. The signal of the electron paramagnetic resonance (which indicates the existence of free radicals) appears in the first stages of the carbonization of polyvinyl chloride and polyvinylidenechloride (beginning with 350°). A diagram shows the variation of the signal width for the 2 investigated substances as a function of the carbonization temperature. A relatively wide line (7 Gauss) in polyvinyl chloride is an argument in favor of an essential influence of the hyperfine splitting up on hydrogen nuclei. Such great widths are characteristic of some natural coals. In the case of polyvinylidenechloride (especially in the initial stages of carbonization) the line of paramagnetic electron resonance is by far narrower than that of the product of the carbonization of polyvinyl chloride. According to radiographic data, an increase of the calcination temperature to 450° only slightly changes the character of the products of the carbonization of polyvinyl chloride. Other results are then discussed.

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Using Electron Paramagnetic Resonance and Roentgenography in Studying the  
Structure of the Carbonization Products Obtained From Carbon-Containing  
Substances

According to these results, the appearing of a wide signal  
is connected with the existence of free valences near the  
individual carbon nets or blocks in which conduction elec-  
trons appear. There are 2 figures.

SUBMITTED: June 28, 1958

Card 3/3

TRIMOMIROV, N.N.; VOL'GOISKY, V.V.

Method for the analysis of the form of electron density in the resonance lines. Opt. i spektr. 7 no. 6:829-832 D 13.  
(III 14:1)  
(Paramagnetic resonance and relaxation)

sov/76-33-9-35/37

5(4)

AUTHORS:

Shilov, A. Ye., Zefirova, A. K., Tikhomirova, N. N.

TITLE:

Paramagnetic Electron Resonance in the System  
 $\text{Al(iso-C}_4\text{H}_9)_3$  -  $\text{Ti(C}_5\text{H}_5)_2\text{Cl}_2$ 

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 9,  
pp 2113 - 2114 (USSR)

ABSTRACT:

A. Ye. Shilov and N. N. Bubnov (Ref 1) found paramagnetic electron resonance absorption (PERA) with a g-factor of about two in the precipitate formed by the reaction of aluminum trialkyls with titanium chlorides. The homogeneous system  $\text{Al(iso-C}_4\text{H}_9)_3$  (I) -  $\text{Ti(C}_5\text{H}_5)_2\text{Cl}_2$  (II) in toluene was investigated here at room temperature. At the applied concentration of (I) of  $2 \cdot 10^{-4}$  mol/l and ratios of (I):(II)=2:1, 10:1, 50:1 and 100:1, the authors found resonance absorption (Fig 1). The results lead to the assumption that the free electrons are located on the atoms of Al or Ti in the system under discussion. The number of basic lines of the hyperfine structure of the (PERA)-spectrum (Fig 2) indicates that the free electron reacts with the nucleus possessing a spin of 5/2, which would

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Paramagnetic Electron Resonance in the System  
 $\text{Al(iso-C}_4\text{H}_9)_3 - \text{Ti(C}_5\text{H}_5)_2\text{Cl}_2$

SOV/76-33-9-35/37

correspond to the Al atom. In this connection, the free electron interacts with two protons and a hyperfine structure of the spectrum is formed due to fission on the atoms of Al and H. In conclusion, the authors thank L. I. Zakharkin and V. V. Gavrilenko for supplying substance (I). There are 2 figures and 1 Soviet reference.

SUBMITTED: February 6, 1959

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## PAGE 1 BOOK EXPLANATION 807/5921

Academy and USSR. Institute Frischenkoy Branch.

Problems in Catalysis. [v. 10] 30: Plakat. I. Frischenkoy Branch, Problems of Physics and Catalysis. [vol. 10] 10: Physics and Physico-Chemistry of Catalysts. Moscow, Izd-vo Akademii Nauk SSSR, 1960. 461 p. Printed 2,600 copies printed.

Edited by: N. I. Bogolyubov, Corresponding Member of the Academy of Sciences USSR, A. L. Mints, S. V. Krylov, Candidate of Chemistry, Ed. of Publishing House, All-Union Tech. Sci. & Techn. Publ.

**PURPOSE:** This collection of articles is addressed to physicists and chemists and to the community of scientists in general interested in recent research on the physics and physical chemistry of catalysis.

**CONTENTS:** The articles in this collection were read at the conference on "The Physics and Physical Chemistry of Catalysts organized by the Odan Institute of Physics and Chemical Sciences, Academy of Sciences USSR and by the Academic Council on the problem of "the scientific bases for the selection of catalysts". The Conference was held at the Institute Frischenkoy Branch (Institute of Physical Chemistry of the AS USSR) in Moscow March 20-23, 1958.

Or the great volume of material presented at this conference only papers on problems of catalysis were included in this collection.

Margolin, Ya. [Institute of Physical Chemistry of the AS USSR]. Intern. 410

Magnetic Active Phases of the Catalytic Oxidation of Hydrocarbons. 415

Krasil'nikov, Yu., and E.G. Koval'chik [Department of Physics of Moscow State University]. Effect of the Nature of the Oxide Surface on its Adsorbing Properties. 421

Krasil'nikov, Yu., and V.V. Kiselev [Department of Physics of Moscow State University]. Adsorptive Properties of Aluminosilicates and of Aluminoglycine. 425

Slobodchikov, N.N., N.I. Krylov, I.M. Strel'tsova, and V.V. Vorozhtsov [Institute of Chemical Physics of the AS USSR]. Investigation of the Interaction of Molecular Oxygen With the Free Valences of Carbon. 425

VII. SOME PROBLEMS IN THE PREPARATION OF CATALYSTS

Demchenko, V. [Institute of Physical Chemistry, Czechoslovak Academy of Science, Prague]. Investigation by Measurement of Surface Area and Structure in Various Stages of Transformation of the Origins of Active Solid Bodies and Catalysts. 430

AVAILABLE: Library of Congress

CARD 17/17

21/10/80  
21

TIKHOMIROVA, N.N.; MARKIN, M.I.; NIKOLAYEVA, I.V.; VOYEVODSKIY, V.V.

Interaction between molecular oxygen and the free valences of coal.  
Probl. kin. i kat. 10:426-428 '60. (MIRA 14:5)

1. Institut khimicheskoy fiziki AN SSSR.  
(Oxygen) (Charcoal)

TIKHOMIROVA, N.N.; NIKOLAYEVA, I.V.; VOLEVODSKIY, V.V.

Application of the electronic paramagnetic resonance method to the  
study of the molecular structure of coals. Zhur. strukt. khim. 1  
no.1:99-102 My-Je '60. (MIRA 13:8)

1. Institut khimicheskoy fiziki AN SSSR.  
(Coal) (Paramagnetic resonance and relaxation)

ZEFIROVA, A.K.; TIKHOMIROVA, N.N.; SHILOV, A.Ye.

Structure of some products resulting from the interaction between aluminum alkyls and derivatives of titanium(IV). Dokl. AN SSSR 132 no.5:1082-1085 Je '60. (MIRA 13:6)

1. Institut khimicheskoy fiziki Akademii nauk SSSR. Predstavлено akademikom V.N. Kondrat'yevym.  
(Aluminum compounds) (Titanium compounds)

TIKHOMIROVA N.N.,

" Application of the esr-method to chemistry: some new  
phenomenes in electron transfer "

Presented at the 10th Annual Colloq. on Radiodielectric Research  
(A. M. P. E. R. E.) Leipzig, 13-17 Sep. 1961.

24,7900 (1055, 1144, 1163)

30915  
S/192/61/002/006/002/004  
D228/D304

AUTHORS: Lebedev, Ya. S., Chernikova, D. M., and Tikhomirova,  
N. N.

TITLE: Computing the spectra of electron paramagnetic re-  
sonance on an electronic calculating machine. 1. EPR  
spectra with an ultrafine structure (symmetrical  
components)

PERIODICAL: Zhurnal strukturnoy khimii, v. 2, no. 6, 1961,  
690-695

TEXT: The authors computed theoretical EPR spectra with an  
ultrafine structure by means of a high-speed calculating machine at  
different ratios of individual component widths to the resolution  
magnitude. Special attention was paid to the area beneath the ab-  
sorption curve, the number of components and the intensity correla-  
tions, the line widths in the spectra, and the form of individual  
lines. Previous work shows that determining these parameters is

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Computing the spectra of ...

impeded by the spectrum's distorted form, and that the line form can only be mathematically analyzed, when laborious calculations are necessary, in the simplest of cases-singlet and doublet lines. Graphs of theoretical spectra were plotted both for cases of equal component intensity and for those of the binomial distribution of intensities (1:2:1, 1:3:3:1, 1:4:6:4:1). The Gauss and Lorentz forms of individual component lines were calculated from the equation

$$I(x) = \sum_{k=1}^n a_k f \left[ \frac{x - k + 1}{\beta} \right]$$

where  $n$  = the number of UFS components,  $a_k$  = the coefficients of intensity,  $k$  = the ordinal number of UFS components,  $f(x) = (1 + 1.335x^2/\beta^2)^{-1}$  and  $\exp(-2x^2/\beta^2)$  for the Lorentz and Gauss

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Computing the spectra of ...

forms respectively,  $\beta = \Delta H_1 / \Delta H_r$ ,  $x = H - H_0 / \Delta H_r$ ,  $\Delta H_r$  = the resolution between the UFS components,  $\Delta H_1$  = the width of individual lines between the points of maximum inclination,  $H_0$  = the field corresponding to the center of the end component, and  $H$  = the magnetic field's alternating value. Two methods are proposed for examining experimental spectra: The direct comparison of observed and theoretical spectra, and the use of nomograms for analyzing unresolved EPR spectra. In the latter the true values of  $\beta = \Delta H_1 / \Delta H_r$  are plotted along the x-axis and  $\Delta H_s^* / \Delta H_r$ ,  $\Delta H_1 / \Delta H_r$ ,  $\Delta H_{r(k-1)}^* / \Delta H_r$ , and  $I_k' / I_l'$  along the y-axis; k and l are the component numbers,  $I_k'$  and  $I_l'$  being the amplitudes of components k and l recorded in a first derivative form. The combination of both methods allows the parameters of unresolved spectra to be determined with sufficient accuracy when both the spectrum structure and  $\Delta H_r$  are known, or when only one of these quantities is known. The desired parameters can apparently be evaluated even if there is absolutely no information about a partially

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Computing the spectra of ...

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resolved spectrum. Thus, the authors conclude that the foregoing procedure will enable different EPR spectra to be satisfactorily deciphered and processed which in turn will increase the possibility of applying the EPR method to solving scientific problems. Due acknowledgement is made to V. V. Voyevodskiy, A. Ya. Povzner, and others on the staff of the Matematicheskiy otdel IKhF AN SSSR Mathematics Section, Institute of Chemical Physics, Academy of Sciences USSR) for their advice and interest. There are figures, 1 table, and 10 references: 7 Soviet-bloc and 3 non-Soviet-bloc. The reference to the English-language publications read as follows: J. G. Powles et al, Proc. Phys. Soc. 77, 729 (1959); W. Gordy et al, Proc. Nat. Acad. Sci. USA 46, 1124 (1961); D. Libby et al, J. Phys. Chem. Solids 18, 316 (1961). W

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AS USSR)

SUBMITTED: July 7, 1961

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L 24186-65

ACCESSION NR: AP4047635

5

and molecular complex formation. A slower rate of growth in the crystalline than in the amorphous MgPc. The rate of growth of film was controlled by the rate of oxygen diffusion into the solid phase. The number of adsorbed oxygen molecules corresponded to the number of paramagnetic centers formed. It was believed the oxygen reacted with the paramagnetic centers of MgPc. When the MgPc film did not react chemically with oxygen, the film was amorphous. MgPc film in NMP solution did not react chemically with oxygen.

Cord 216

ACC NR: AP6019225

(A)

SOURCE CODE: UR/0073/66/032/352/0115/0112

AUTHOR: Samsonov, G. V.; Vereykina, L.L.; Yendrzhelyevskaya, S. N.; Tikhonova, N.N.

ORG: Institute of the Problems of Material Science, AN UkrSSR (Institut Problem materialovedeniya AN UkrSSR)

TITLE: Production and some properties of rare-earth phosphides

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 32, no. 2, 1966, 115-118

TOPIC TAGS: rare earth element, phosphide, lanthanum compound, neodymium compound, samarium compound, oxidation

ABSTRACT: The literature was reviewed on various methods of producing rare-earth phosphides together with the tabulated data on their crystallochemical properties (lattice parameters and densities determined from x-ray diffraction patterns). The reaction of phosphine ( $\text{PH}_3$ ) with rare-earth metals or their oxides was used in this investigation for preparing La, Nd, and Sm phosphides. Phosphidization was carried out in an apparatus described previously (L. L. Vereykina and G. V. Samsonov, Zh. neorg. kh., 5, 1888, 1960) by passing  $\text{PH}_3$  over heated metal or oxide powder. The LaP, having a nearly stoichiometric composition, was obtained by the reaction of  $\text{PH}_3$  with  $\text{La}_2\text{O}_3$  at 1200-1250°C and a 3-5 hr exposure to the flow of H. The LaP powder was dark gray in color, it was insoluble in water and in cold and heated alkali solutions, but it

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ACC NR: AP6019225

dissolved well in diluted and concentrated HCl and aqua regia, and was weakly soluble in H<sub>2</sub>SO<sub>4</sub> at any concentration. The NdP was produced either from metallic Nd at 1100C and a 3 hr exposure to an Ar atmosphere, or from Nd<sub>2</sub>O<sub>3</sub> at 1350C and a 3 hr exposure in H. The NdP powder had a black color, a nearly stoichiometric composition, was insoluble in H<sub>2</sub>O, but dissolved in the same solvents as LaP; SmP of nearly stoichiometric composition was produced from metallic Sm at 900C after 7 hrs. of phosphidization, and from Sm<sub>2</sub>O<sub>3</sub> at 900-1350C and 2-5 hrs. of phosphidization. From Sm<sub>2</sub>O<sub>3</sub> the SmP was formed most efficiently at 1300-1350C. It was in the form of black powder which did not change during prolonged storage in air. The SmP dissolved well in HNO<sub>3</sub> of various concentrations, in HCl, and partly in H<sub>2</sub>SO<sub>4</sub>. It did not dissolve in H<sub>2</sub>O and alkali solutions either cold or boiling. Thus, LaP, NdP, and SmP all dissolved well in diluted or concentrated HNO<sub>3</sub>. To keep the P in solution it was necessary to dissolve them in the presence of a strong oxidizer using either a mixture of HNO<sub>3</sub> with bromine water or diluted HNO<sub>3</sub> (1:1) saturated cold by KBrO<sub>3</sub> solution. Orig. art. has: 1 fig. and 2 tables.

SUB CODE: 07/ SUBM DATE: 30Sep64/ ORIG REF: 007/ OTH REF: 012

Card 2/2

SHAROVAN, E.G.; DUBROV, Yu.N.; TIKHOMIROVA, N.N.; BLYUMENFEL'D, L.A.

Study of the molecular complexes of magnesium phthalocyanine and  
other phthalocyanines with iodine by the electron paramagnetic  
resonance method. Teoret. i eksper. khim. 1 no.4:519-524  
(MIRA 18:10)  
'65.

1. Institut khimicheskoy fiziki AN SSSR, Moskva.

ZAMARAYEV, K.I.; TIKHOMIROVA, N.N.

Study of copper compounds with triethanolamine in aqueous  
solutions by the electron paramagnetic resonance method.  
Izv. AN SSSR. Ser. khim. no.4:753-755 '65. (MIRA 18:5)

1. Institut khimicheskoy fiziki AN SSSR.

ZAMARAYEV, K.I.; TIKHOMIROVA, N.N.

Study of aqueous solutions of copper ammoniates by the method  
of electron paramagnetic resonance. Zhur. strukt. khim. 5 no.5:  
691-696 S-0 '64 (MIRA 18:1)

1. Institut khimicheskoy fiziki AN SSSR.

ZAMARAYEV, K.I.; TIKHOMIROVA, N.N.

Influence of the dipole-dipole superfine interactions on the  
electron paramagnetic resonance spectra of paramagnetic ions  
in solutions. Zhur. strukt. khim. 5 no.4:621-623 Ag '64.  
(MZhA 18:3)

I. Institut khimicheskoy fiziki AN SSSR.

LEBEDEV, Ya.S.; TIKHOMIROVA, N.N.; VOYEVODSKIY, V.V., otv. red.:  
TERENT'YEVA, E.N., redaktor

[Atlas of electron paramagnetic resonance spectra] Atlas  
spektrov elektronnogo paramagnitnogo rezonansa. Moskva,  
Izd-vo "Nauka." No.2. [Theoretically calculated symmetrical  
spectra with a complex hyperfine structure] Teoreticheskie  
rasschitatnye simmetrichnye spektry so slozhnoi sverkhtonkoi  
strukturoi. 1964. 197 p. (MIRA 17:7)

1. Akademiya nauk SSSR. Institut khimicheskoy fiziki. 2. La-  
boratoriya khimicheskoy radiospektroskopii Instituta khimi-  
cheskoy fiziki AN SSSR (for Lebedev).

TIKHOMIROVA, N.N.

Two cases of intracranial complications following inflammatory diseases of the pharynx. Vest. oto-rin. 25 no.2:95-96  
(MIRA 17:1)  
Mr-Ap '63.

1. Iz otorinolaringologicheskogo otdeleniya oblastnoy  
bol'nitsy imeni V.I. Lenina, Chita.

TIKHOMIROVA, N.N.

Two cases of intracranial complications following inflammatory diseases of the pharynx. Vest. oto-rin. 25 no.2:95-96  
(MIRA 17:1)  
Mr-Ap '63.

1. Iz otorinolaringologicheskogo otdeleniya oblastnoy  
bol'nitsy imeni V.I. Lenina, Chita.

TIKHOMIROVA, N. N.

"Nuclear Magnetic Resonance Study of the Copper Complexes in Solutions."

report submitted to 11th Intl Spectroscopy Colloq, Belgrade, 30 Sep-4 Oct 63.

TIKHOHOMIROVA, N.N.; ZAMARAYEV, K.I.

Study of nitrogen-containing copper complexes by the electron  
paramagnetic resonance method. Zhur.strukt.khim. 4 no.2:  
224-230 Mr-Ap '63. (MIRA 16:5)

1. Institut khimicheskoy fiziki AN SSSR.  
(Copper compounds--Spectra) (Nitrogen compounds)

TIKHOHOMIROVA, N.N.; ZAMARAYEV, K.I.; BERDNIKOV, V.M.

Electron paramagnetic resonance studies of copper-ammonia solutions.  
Zhur.strukt.khim. 4 no.3:449-450 My-Je '63. (MIRA 16:6)

1. Institut khimicheskoy fiziki AN SSSR.  
(Copper compounds--Spectra) (Ammonia)

LEBEDEV, Ya.S.; CHERNIKOVA, D.M.; TIKHOMIROVA, N.N.; VOYEVODSKIY,  
V.V., otv. red.; BUTOMO, N.N., red.izd-va; SIMKINA, G.S.,  
tekhn. red.; POLENOVO, T.P., tekhn. red.

[Atlas of electron paramagnetic resonance spectra; theoretical-  
ly computet multicomponent symmetric spectra]Atlas spektrov  
elektronnogo paramagnitnogo rezonansa; teoreticheski rasschi-  
tannye mnogokomponentnye simmetricheskie spektry. Moskva, Izd-  
vo Akad. nauk SSSR, 1962. 228 p. (MIRA 15:12)

1. Akademiya nauk SSSR. Institut khimicheskoy fiziki. 2. Labo-  
ratoriya khimicheskoy radiospektroskopii Instituta khimicheskoy  
fiziki Akademii nauk SSSR (for Lebedev, Chernikova, Tikhomirova).  
(Paramagnetic resonance and relaxation—Spectra)

114400  
S/192/62/003/003/003/006  
D228/D307

AUTHORS: Tikhomirova, N. N. and Chernikova, D. M.

TITLE: Electron paramagnetic resonance spectra of solid phthalocyanines

PERIODICAL: Zhurnal strukturnoy khimii, v.3, no. 3, 1962, 335-337

TEXT: The authors give the results of their investigation of the electron paramagnetic resonance spectra of phthalocyanin and its Co, Cu, Fe, Mg, and Ni salts. Save for the Co salt, all the studied compounds show electron paramagnetic resonance signals with a g-factor, varying from 2.0 to 3.6. The temperature relationship of these signals is described by Curie's law. The narrow electron paramagnetic resonance lines are caused by a structural effect, related to both the characteristics of the molecules and the manner in which they are packed in the crystal. Reference is made to similar research, recently performed by Neiman and Kivelson, and to more general work by L. A. Blyumenfel'd and V. A. Benderskiy. There is 1 figure. The most important English-language reference reads as

Card 1/2

Electron paramagnetic ...

S/192/62/003/003/003/006  
D228/D307

follows: R. Neiman, D. Kivelson, J. Chem. Phys., 35, 162, 1961.

ASSOCIATION: Institut khimicheskoy fiziki, AN SSSR (Institute of  
Chemical Physics, Academy of Sciences, USSR)

SUBMITTED: January 5, 1962

Card 2/2

TIKHOVYILOVA, N.P., kand. tekhn. nauk; LIUGOVAYA, N.D., inzh.

Economic efficiency of lowering norms for prepared reserves  
in mining enterprises. [Trudy] VNIMI no.47:258-263 '62  
(MIRA 17:7)

TIKHOVYI ROVA, N.P., kand. tekhn. nauk

Methods of establishing norms for reserves prepared and ready  
for mining at enterprises of the East Kazakhstan Council of  
National Economy. [Trudy] VNIMI no.47:249-257 '62 (MIRA 1722)

TIKHOMIROVA, N.P., inzh.

Projecting a point from the surface into a mine by means of a  
freely falling object. [Trudy] VNIMI no. 33:54-61 '58.  
(MIRA 14:5)

(Mine surveying)

TIKHOIROVA, N.P., kand. tekhn. nauk; LUGOVAYA, N.D., inzh.; IVANOV,  
A.Ya, inzh.

Control over the providing of mines with prepared reserves.  
[Trudy]VNIM no.50:285-291 '63. (MIRA 17:10)

TIKHOMIROVA, N.P., inzh.

Effect of the magnetic field on the reading of a surveying  
gyrocompass. [Trudy] VNIMI no. 33:76-86 '58. (MIRA 14:5)  
(Gyrocompass)

TIKHOMIROVA, N. P., Cand Tech Sci -- (diss) "Research into the effect of magnetic fields on the orientation precision of mines by the hyposcopic method." Leningrad, 1960. 24 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Leningrad Mining Inst im G. V. Plekhanov); 200 copies; price not given; printed on duplicating machine; (KL, 50-60) 134)

TIKHOMIROVA, N.P.

Effect of streptomycin on the function of the central nervous system in animals (guinea pigs) [with summary in English].  
Zhur.vys.nerv.deist. 8 no.1:116-122 Ja-F '58. (MIRA 11:3)

1. Laboratoriya patofiziologii Instituta tuberkuleza AMN SSSR. Moskva.  
(REFLEX, CONDITIONED,  
eff. of streptomycin in guinea pig (Rus)  
(STREPTOMYCIN, effects,  
on conditioned reflex funct. in guinea pigs (Rus)

USSR / Pharmacology and Toxicology. Chemotherapeutic Agents. V-10

Abs Jour : Ref. Zhur - Biologiya, No 17, 1958, No. 80696

Author : Tikhomirova, N. P.

Inst : Institute for Tuberculosis, Academy of Sciences USSR

Title : Influence of Streptomycin on Conditioned Reflex Activity  
of Guinea Pigs

Orig Pub : Tr. In-ta tuberkuleza. Akad. med. nauk SSSR, 1957, 9,  
301-312

Abstract : The influence of streptomycin on motor-food conditioned reflexes was studied on 9 guinea pigs (6000 units 10-27 days and 30,000 units 5 days for 2 hours before food) by the Kotlyarevskiy method. Therapeutic and especially large doses of streptomycin caused a decrease of the conditioned reflex activity and developed in close dependence the typological peculiarities of the animals. In animals with a weakened process of excitability, a deeper

Card 1/2

USSR / Pharmacology and Toxicology. Chemotherapeutic Agents. V-10

Abs Jour : Ref. Zhur - Biologiya, No 17, 1958, No. 80696

inhibition was observed, which continued more than 10 days after the cessation of the injections. In the animals of the weak type, with a decreased or weak tonus of the motor centers, a partial or full normalization of the cortical activity was observed.

Card 2/2

38

TIKHOIROVA, N. P.

Working conditions and measures for their improvement  
in production and use of vinyl chloride plastic. S. I.  
Tribukh, N. P. Tikhomirova, S. V. Levum and A. A.  
Kozlov. *Gigiena i Sanit.* 1949, No. 10, 33-44.—In the  
production departments the concn. of org. Cl in a typical  
plant is usually within 0.005-0.27 mg./l., with a large pro-  
portion caused by chlorinated biphenyls (Sovol). The use  
of effective ventilation sites is stressed. In plants which  
utilize the products for consumer industry similar or some-  
what higher atm. Cl can be found and ventilation needs  
are again stressed. Workers show tendency for respira-  
tory and circulatory disorders, with some cases of hepatitis.  
Chlorinated biphenyl plasticizers may cause acne-type  
skin eruptions, largely on the face. Pressure rolling at  
above 120-30° is not recommended. G. M. K.

31

TIKHMIRVA, N.P., LEVINA, S.V., and KOZLOV, L.A., TRIBKH, S.L.

Chlorvinyl plastics are by-products of polymerization of the chlorvinyl resins. The manufacturing process involves production of carbon dioxide and a vapour of organic chlorides, which affect workers employed in this industry. Exhaust ventilation arranged vertically just above the work benches secures the best hygienic conditions, but all methods of ventilation so far tried have failed to protect workers adequately against ill effects of the process.

Medical examination of personnel showed that the most frequent finding is of a precipitate upon the mucous membranes which forms a very thin layer, quite difficult to remove. Hyperacmia of the upper respiratory passage was found in 17 out of 18 cases investigated; chronic bronchitis in 13, gastritis in 10, and colitis in 2 cases there was also some degree of anaemia. An acniform dermatitis was not uncommon. Personnel engaged in manufacture of chlorvinyl plastics should be provided with appropriate underwear and a special overall for protection of the body. The former should be thoroughly ventilated before and after working hours.

E.W. COLLIS

ABSTRACTS OF WORLD MEDICINE VOL. 7 1950

PIKHOMIROV, N. P.

"Silicosis in the Production of Dines Refractory Material." Candi  
Med Sci, Acad of Med Sci USSR, 6 Oct 54. (VM, 27 Sep 54)

SO: Sum 432, 29 Mar 55

TIKHOHMIROVA, N.P., kand. tekhn. nauk

Calculation of norms for prepared reserves during the under-ground mining of ore deposits. [Trudy VNIMI no. 50:279-284  
163.]  
(MIR 17:10)

31

CA

Working conditions and measures for their improvement in production and use of vinyl chloride plastics. S. L. Frabukh, N. P. Tikhonova, S. V. Levina, and L. A. Kozlov. *Gigriada i Sanit.* 1949, No. 10, 38-41. In the production departments the content of org. Cl in a typical plant is usually within 0.05-0.27 mg./l., with a large proportion caused by chlorinated biphenyls (Sovol). The use of effective ventilation sites is stressed. In plants which utilize the products for consumer industry similar or somewhat higher atm. Cl can be found and ventilation needs are again stressed. Workers show tendency for respiratory and circulatory disorders, with some cases of hepatitis. Chlorinated biphenyl plasticizers may cause acne-type skin eruptions, largely on the face. Pressure rolling at above 120-30° is not recommended. G. M. K.

S. J. C. L.

*General Works, Processes  
and Materials:*

Conditions of work and industrial hygiene  
measures in production of, and manufacture from,  
vinyl chloride plastics. S. I. TIKHOMIROV, N. V.  
TIKHOVSKAYA, S. V. LEVINA, and L. A. KUDOV.  
*Gigriat Sanitariya*, 1919, No. 10, 38-44; *Trans-  
lated Contents Lists of Russian Periodicals*, 1920,  
No. 8, 11.

75020-21121

1460

13,2520

20045

S/146/61/004/001/009/016  
B104/B215AUTHOR: Tikhomirova, N. P.

TITLE: Screening of magnetic fields in surveying compasses

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye,  
v. 4, no. 1, 1961, 77-83

TEXT: 1955-1958 the institute of the Association conducted studies of the effect of magnetic fields on indications of surveying gyroscopes. The present paper reports on these studies and gives results on screening the magnetic field with an accuracy of  $\pm 1'$ . Studies were carried out in coal mines by instruments of the types M-3 (M-3), M $\Gamma$ -2 (MUG-2), and M $\Gamma$ (MG). If the gyro-compass is magnetized in horizontal direction, disturbances of the compass are strongest when the angles between magnetization and axis of revolution of the gyroscope are  $45^\circ$ ,  $135^\circ$ ,  $225^\circ$ , and  $315^\circ$ . At angles of  $0^\circ$ ,  $90^\circ$ ,  $180^\circ$ , and  $270^\circ$ , the horizontal component of the magnetic field does not affect the balanced position of the gyro-compass. If the magnetization of the compass has a horizontal and vertical component, the direction of largest sensitiveness depends on the ratios

Card 1/3

20045

S/146/61/004/001/009/016  
B104/B215

Screening of magnetic fields ...

of components, material, and shape of the gyroscope. An alternating magnetic field has a smaller effect upon the balanced position of the axis of the gyroscope. The effect of the magnetic field increases as the directing moment of the gyro-compass decreases. It was found that the magnetic field existing in a modern pit differs from the magnetic field on the earth's surface due to electric cables etc, and causes a deviation in the indications of the above instruments by several angle minutes. Magnetization of the rotor only affects the balanced position of the gyroscope when its direction is the same as that of rotation. Fundamental effects of rotor magnetization could not be found. Interaction between external magnetic field and the magnetic field of the gyroscope causes a torque about all three axes. The external magnetic fields which cause a torque about the z-axis, are most effective. The method suggested by A. A. Preobrazhenskiy in his thesis was applied for calculating the magnetic screening which warrants protection against fields of approximately 2-3 oersteds. Deviations of the two above types could be reduced from  $\pm 1'30''$  and  $\pm 1'50''$ , to  $\pm 0'56''$  and  $\pm 0'55''$  respectively. Screens were made of 79 HM-(79NM) steel with a weight between 1.2 and 4.4 kg. Special heat

Card 2/3

20045

Screening of magnetic fields ...

S/146/61/004/001/009/016  
B104/B215

treatment is suggested for providing the steel with a maximum magnetic susceptibility. The publication of this article was recommended by the Orgkomitet II mezhvuzovskoy konferentsii po problemam sovremennoy giro-skopicheskoy tekhniki (Organizing Committee of the Second Intercollegiate Conference on Problems of Modern Gyroscopy). There are 1 figure and 2 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy marksheyderskiy institut  
(All-Union Scientific Research Institute of Surveying)

SUBMITTED: September 21, 1960

Card 3/3

TIKHOMIROVA, N. S.

USSR/Chemistry - Isomerization  
Aldehydes

Nov 48

"Isomerization of Oxyaldehydes: XII, Oxyketones With a Primary Alcholic Group and Their Reaction to Alpha-Oxyaldehydes and to Isomeric Alpha-Oxyketones," S. N. Danilov, N. S. Tikhomirova, Lab imeni A. Ye. Favorskiy, Sci Res Chem Inst Affiliated With Leningrad State U, 7 pp

"Zhur Obshch Khim" Vol XVII, No 11

Found that 1-chloro-2-butanol was converted either to hydroxymethyl ethyl ketone or 2-methyl-alpha-hydroxyethyl ketone, depending on the conditions of the reaction.

Submitted 15 Apr 48.

PA 67/49T22

TIKHOMIROVA, N. S.

Danilov, S. N., Tikhomirova, N. S., "Isomerization of Oxyaldehydes. III. Oxyketones with a Primary Alcoholic Group and Their Relation to  $\alpha$ -Oxyaldehydes and to Isomeric  $\alpha$ -Oxyketones." (p. 1956)  
(Sci-Research Chem Inst Affiliated with Leningrad State Univ. Lab imeni A. Ye. Favorskiy)

SO: Journal of General Chemistry. (Zhurnal Obshchei Khimii), 1948, Volume 18, (80),  
No. 11

Tikhomirova, N. S.

S.N. Danilov and N.S. Tikhomirova, Isomerization of oxy-aldehydes. XII. Oxy-ketones with the primary alcohol group and their relation to the  $\alpha$ -oxy-aldehydes and to the isomeric  $\alpha$ -oxy-ketones. p. 1956

The study of the transformations of  $\alpha$ -oxy-aldehydes with the secondary alcohol group raised a question concerning the inter-relations of the  $\alpha$ -keto-alcohols with the primary alcohol group and two possible  $\beta$ -keto-alcohols with the secondary alcohol group.

The Scientific Research Inst. of Chem.  
at the Leningrad State University.  
The Favorkii Laboratory.  
April 15, 1948

SO: Journal of General Chemistry (USSR) 28, (80) No. 11, 1948

1. BOGROVA, M. I.; TIKHMIRIOVA, N. S.
2. USSR (600)
4. Polarograph and Polarography
7. Oxidation - Reduction transformations. Part 1. Polarographic investigation of 1-chlorobutanone-2, 3-chlorobutanone-2, propionyl-carbinol, and methylacetylcarbinol. Zhur. ob. khim. 22, No. 12, 1952.
9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

1. BCEROVA, M. I.; TIEHUTICOVA, N. S.
2. USSR (600)
4. Polarograph and Polarography
7. Oxidation-reduction transformations. Part 2. Polarographic investigation of benzoin, benzyl, diacetyl, and ethlglyoxal. Zhur. ob. khim. 22, No. 12, 1952.
  
9. Monthly List of Russian Accessions, Library of Congress, May 1953, Unclassified.

TIKHOMIROVA-SIDOROVA, N. S.

Defended his Dissertation for Candidate of Chemical Sciences in the Institute  
of High Molecular Compounds, Academy of Sciences USSR, Leningrad, 1953

Dissertation: "Reduct<sup>ive</sup> and Oxidation-Reduction Transformations of Compounds  
Containing Carbonyl and Hydroxyl Groups"

SO: Referativnyy Zhurnal Khimiya, No. 1, Oct. 1953 (W/29955, 26 Apr 54)

Tikhomirova-Sidorova, N. S.

USSR/Chemistry - Polymerization

Card 1/1 : Pub. 151 - 11/37

Authors : Danilov, S. N., and Tikhomirova-Sidorova, N. S.

Title : The role of the oxidation-reduction characteristics of alpha-oxyketones during initiated polymerization

Periodical : Zhur. ob. khim. 24/3, 455-458, Mar 1954

Abstract : Experimental results indicate that the participation of hydroxycarboxylic compounds in oxidation-reduction systems during the polymerization of unsaturated compounds may serve as a means for the evaluation of their oxidation-reduction characteristics. The three keto-alcohol groups found most active in oxidation-reduction systems during polymerization are listed. Keto-alcohols, having played an important role as reducing agent in oxidation-reduction systems during polymerization, become oxidized; the cause for the oxidation is explained. Twelve references: 9-USSR; 1-USA and 2-German (1913-1954). Graph.

Institution : Academy of Sciences USSR, Institute of High Molecular Compounds

Submitted : December 1, 1953

Tikhomirova - Sidorova, N. S.  
USSR/Chemistry - Isomerization

Card 1/1 : Pub. 151 - 12/37

Authors : Danilov, S. N., and Tikhomirova-Sidorova, N. S.

Title : Isomerization of alpha-oxyaldehydes. Part 13.- Conversions of alpha-halo-  
geno- and alpha-oxyketones with primary alcohol group

Periodical : Zhur. ob. khim. 24/3, 458-465, Mar 1954

Abstract : Isomeric conversions of alpha-oxyaldehydes were investigated to determine  
the role of primary alpha-keto-alcohols in oxidation-reduction conversions.  
It was found that primary keto-alcohols (propionylcarbinol and phenylacet-  
ol) do not isomerize in conditions of alpha-oxyaldehyde conversion. It  
is assumed that the isomerization of alpha-oxyaldehydes into secondary  
keto-alcohols does not proceed through the stage of primary keto-alcohol.  
The lesser reducibility of primary keto-alcohol, as compared with that of  
secondary alcohol, was confirmed by a polarographic method. Twenty-two  
references: 15-USSR; 1-Canadian; 2-French; 1-USA and 3-German (1890-1952).  
Table.

Institution : Academy of Sciences USSR, Institute of High Molecular Compounds  
Submitted : October 29, 1953

TIRKHOVSKAYA, TIKHONOVKA, NO. 2.

U.S.K.

Hydro- and solvolytic and intramolecular oxidation-reduction III. The role of the oxidation-reduction properties of  $\alpha$ -hydroxy ketones in initiated polymerization,  
S. M. Kharlamov and A. S. Ishumirov, Sibirsk. J. Gen.  
Chem., U.S.S.R., 24, 1053 (1954) (Engl. translation). See  
C.A. 47, 610a.

H. L. H.

TIKHOMIROVA S. Moscow, U.S.S.R.

5

✓ Intermolecular and intramolecular oxidation-reduction.  
IV. Hydrogenation of the hydroxyl group and unsaturated bonds in unsaturated alcohols. N. S. Tikhomirova-Sidorova (Inst. High Molecular Compds. Acad. Sci. U.S.S.R., Moscow). Zhur. Oshchel. Khim. 25, 1504-7 (1955); cf. C.A. 49, 6113i, 6116b.—Hydrogenation of Ph-CH<sub>2</sub>OH in an autoclave with Raney Ni at 200° and 105 atm. gave mainly MePh and 20% cyclohexylcarbinol. Chinamyl ale. took up 1.8 moles H and gave mainly PrPh and up to 50% hydrocinnamic alc. Hydrogenation of this gave 60% PrPh and 60% unreacted alc. G. M. Kosolapoff

SAVIN, A.G.; VAYSBERG, S.E.; KARPOV, V.L.; TIKHOMIROVA, N.S.

Diffusion of gases in polymers being subjected to ionizing radiation,  
Vysokom. soed. 7 no.8:1427-1429 Ag '65. (VIRA 18:9)

1. Fiziko-khimicheskiy institut imeni L.Ya.Karpova AN SSSR, Moskva.

SOURCE: Plasticheskiye resy., n.

TOPIC TAGS: [Memory](#) [Time](#) [Death](#) [Memory loss](#)

ABSTRACT. Large triplex molecules have been produced by induced solid-phase polymerization of crystalline polyacrylate. The visible experiments, carried out at 100°C., show that the polymerization is controlled by the temperature and the time of heating. The polymer is formed by passing sealed ampoules with the monomer solution through a flame at 100°C. for 10 minutes. The polymer is a random triplex molecule, which consists of three linear chains, i.e., transpeptidic, hydrophobic, and hydrophilic.

Card i/2

"APPROVED FOR RELEASE: 07/16/2001

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ACQUISITION: 00

SUBMITTER: 00

Card 2

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RECEIVED AND INDEXED BY THE LIBRARY OF THE INSTITUTE OF POLITICAL SCIENCE

Growing tensions over Soviet missile deployment in Poland. Pg. 4 #15.  
(Title Pg. 1)

I. Institut für Politikwissenschaften der Universität Bonn.

ACCESSION NR: AP4018156

S/0191/64/000/003/0004/0005

AUTHOR: Tikhomirova, N. S.; Serenkov, V. I.; Krayevskaya, Ye. I.

TITLE: Radiation grafting of 2-methyl-5-vinylpyridine on polyethylene

SOURCE: Plastichekiye massy\*, no. 3, 1984, 4-5

TOPIC TAGS: polymer grafting, radiation grafting, polyethylene, 2-methyl-5-vinylpyridine, divinylbenzene, graft copolymer, polyethylene graft copolymer, 2-methyl-5-vinylpyridine graft copolymer, divinylbenzene graft copolymer, properties, mechanical strength, free radical mechanism

ABSTRACT: The conditions for radiation grafting of 2-methyl-5-vinylpyridine on polyethylene and the properties of the resultant copolymers were studied. Experiments were conducted under vacuum and in air using Co<sup>60</sup> (activity of 598 g equiv Ra); with this gamma irradiation the grafting rate is high even in air: a free radical mechanism is suggested. Increasing the 2-methyl-5-vinylpyri-

Card 1/2

ACCESSION NR: AP4018156

dine content in the copolymer increases mechanical strength: with 300% graft onto polyethylene, the strength is increased 2.65 times over the original. Additional grafting of 2-10% divinylbenzene to form a polyethylene-2-methyl-5-vinyl-pyridine-divinylbenzene system significantly increases the mechanical strength above that of the two component polymer. The polyethylene-2-methyl-5-vinyl-pyridine copolymers appear homogeneous, transparent, and slightly yellow. Original art. has: 2 figures.

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 27Mar84

ENCL: 00

SUB CODE: CH, MA

NO REF SOV: 001

OTHER: 004

Card 2/2

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755610014-1

AND GASTON LEE KENNEDY, JR., THE FATHER OF THE CHILD,  
WILL BE IN COURT TOMORROW.

<sup>6</sup> See also the discussion of the concept of "cultural capital" in Bourdieu, *Distinction*.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610014-1"

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APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755610014-1"

AKUTIN, M.S.; TIKHOMIROVA, N.S.; YERMOLAYEV, A.D.

Preparation of polyformaldehyde by means of radiation polymerization  
of trioxane. Plast.massy no.12:12-13 '63. (MIRA 17:2)

TIKHOMIROVA, N.S.; SERENKOV, V.I.; KRAYEVSKAYA, Ye.I.

Radiation grafting of 2-methyl-5-vinylpyridine on polyethylene.  
Plast. massy no.3:4-5 '64. (MIRA 17:3)

TIKHOMIROVA, N.S.; KOTRELEV, V.N.

Some methods for calculating the service life of a plastic lining  
performing in aggressive liquids. Plast.massy no.10:36-38 '63.  
(MIRA 16:10)

TIKHOMIROVA, N.S.; ZERNOVA, K.I.; KOTRELEV, V.N.

Some methods of evaluating plastic lining materials in their  
relation to corrosive liquids. Plast. massy no.12:40-45 '62.

(Plastics) (Corrosion-resistant materials) (MIRA 16:1)

USTYUZHANIN, G.Ye.; TIKHOIROVA-SIDOROVA, N.S.; DANILOV, S.N.

Hexitol anhydride with with a  $\beta$ -ring-  
1,3-anhydro-2,4-methylene-5,6-dimethyl-D-sorbitol. Zhur. ob.  
khim. 33 no.2:453-457 F '63. (MIRA 16:2)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.  
(Sorbitol) (Hexitols)

ACC NR: AP7011821

SOURCE CODE: UR/0079/66/036'012·2219/2220

AUTHOR: Tikhomirova-Sidorova, N. S.; Ustyuzhanin, G. Ye.; Kogan, E. M.

ORG: none

TITLE: Alcoholsysis of uridine-2',3'-cyclophosphate with uridylic acid in the presence of pancreatic ribonuclease

SOURCE: Zhurnal obshchey khimii, v. 36, no. 12, 1966, 2219-2220

TOPIC TAGS: paper chromatography, organic phosphate, hydrolysis, ribonucleic acid

SUB CODE: 07

ABSTRACT: Alcoholsysis of uridine-2',3'-cyclophosphate (I) was carried out in an 0.015 M phosphate buffer solution (pH 7.0) at 0°. The reaction mixture with a total volume of 1 ml. contained 17 mg. pancreatic ribonuclease, I in a concentration of 0.12 M, and uridylic acid in concentrations of 0.24-0.72 M. The reaction products were separated by paper chromatography. The reaction, as indicated by disappearance of I, was completed in 20 hrs. The yield of oligonucleotides in all experiments was ~ 10%. In the presence of a 6-fold excess of uridylic acid, uridyl-(3',5')-uridine-3'(2')-phosphate formed predominantly. Although hydrolysis took place to a greater extent than alcoholsysis, the reaction can be applied for

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UDC: 547.495.6+577.15

0932

0408

ACC NR: AP7011821

the synthesis of dinucleotides with a 3',5' phosphoric acid diester link.  
Orig. art. has: 1 formula. [JPRS: 40,351]

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S/844/62/000/000/085/129  
D423/D307

AUTHORS: Klimanova, R. S., Serenkov, V. I. and Tikhomirova, N. S.

TITLE: Grafting of styrene to polyethylene with the object of producing materials for ion-exchange membranes

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimi. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 501-506

TEXT: The present work was carried out in view of the lack of data and of the inconclusive results obtained by other workers regarding the conditions of formation of grafted polymers under the action of  $\gamma$  radiation and their application to ion-exchange techniques. Films of polyethylene, both stabilized and unstabilized, were irradiated with styrene by  $\gamma$  radiation from a Co<sup>60</sup> source with a 598 g equiv. of radium, in vacuo. The extent of grafting depended on radiation intensity, time of irradiation, temperature and thickness of the polymeric film. Grafting increased with increas-

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D4-3/D307

Grafting of styrene ...

ing time of irradiation (for constant dosage and at room temperature) but increasing if radiation intensity first decreased and then increased the amount of grafting. 80% grafting was observed for 50 and 230 r/sec, but with 230 r/sec more homopolymer tended to be formed. Investigations of the temperature dependence were conducted at room temperature (or close to it) and the results indicated that 50% grafting occurred. In order to investigate the effect of film thickness, experiments were conducted at a dose of 3 Mrad and an intensity of 100 r/sec, with and without film stabilizers (diphenylamine). It was found that the optimum thickness was 0.6 mm but the presence of a stabilizer considerably reduced the amount of grafting. The mechanical characteristics of grafted copolymers were investigated and the results showed that the materials were suitable for use as cationic membranes, especially those having a styrene content of about 35 - 37%. Optimum conditions for obtaining suitable products were found to be: room temperature, dosage 0.06 - 0.1 megarad, intensity 4 - 15 r/sec and film thickness 0.2 mm. Under these conditions, homopolymerization proceeds at a slow rate and hence the yield of monomer is kept down. There are 3 fi-

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Grafting of styrene ...  
gures and 3 tables.

S/844/62/000/000/085/129  
D423/D307

ASSOCIATION: Nauchno-isslyedovatel'skiy institut plastmass (Scientific Research Institute of Plastics)

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5.4600  
S/081/62/000/003/088/090  
B159/B101

AUTHORS: Tikhomirova, N. S., Malinskiy, Yu. M., Karpov, V. L.

TITLE: Irreversible and reversible changes of the diffusion characteristics of certain polymers as a result of the action of gamma radiation on a polymer

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 3, 1962, 644-645, abstract 3R65 (Tr. Tashkentsk. konferentsii po mirn. ispol'zovaniyu atomn. energii, 1959, v. I. Tashkent, AN UzSSR, 1961, 334-339)

TEXT: The diffusion of He, Ar, and Xe through films of polyethylene (PE), polyamide-54/10 (PA), methylolpolyamide-2/10, CKC-30 (SKS-30) and polytetrafluorethylene (PTFE) after gamma irradiation is studied. The constants of diffusion (D) and permeability (PR) were determined. In the case of He after a dose of 400 Mrads at 25 and 95°C, D and PR decreased for all polymers. On increasing the irradiation dose the activation energies of D and PR increase in the case of the polyamides; in the case of PE when the irradiation dose was increased to 400 Mrads the activation

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Irreversible and reversible ...

S/081/62/000/003/088/090  
B159/B1-01

energies decreased and then remained practically constant. In all cases an aftereffect was observed. It was established that PR sharply increases at the initial moment of irradiation. PR assumes its initial value on removal of the source. The acceleration of PR grows as the dose rate is increased. It is assumed that the increase of PR is due to an increase in solubility of He, Ar, and Xe, or by an acceleration of D, or by both factors simultaneously. [Abstracter's note: Complete translation.] *✓*

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TIKHOMIROVA, N.S.; MALINSKIY, Yu.M.; KARPOV, V.L.

Diffusion processes in polymers. Part 1: Diffusion of monatomic gases through polymer films of different structure. Vysokom. soed. 2 no.2:221-229 F '60. (MIRA 13:11)

1. Nauchno-issledovatel'skiy institut plasticheskikh mass i Fiziko-khimicheskiy institut imeni L.Ya. Karpova.  
(Polymers) (Diffusion)

TIKHOMIROVA, N.S.; MALINSKIY, Yu.M.; KARPOV, V.L.

Diffusion processes in polymers. Part 2: Effect of the atomic diameter on the diffusion of gases in the polymer. Vysokom.  
soed. 2 no.2:230-237 F '60. (MIRA 13:11)

1. Nauchno-issledovatel'skiy institut plastmass i Fiziko-khimicheskiy  
institut imeni L.Ya. Karpova.  
(Diffusion) (Polyethylene) (Polyamides)

TIKHOMIROVA, N.S.; MALINSKIY, Yu.M.; KARPOV, V.L.

Study of the diffusion processes in some polymers. Part 3: Irreversible changes in diffusion characteristics, taking place as a result of irradiation with gamma rays for Co<sup>60</sup>. Vysokom. soed. 2 no.9:1335-1348 S '60. (MIR 13:9)

1. Nauchno-issledovatel'skiy institut plastmass i Fiziko-khimicheskiy institut im. L.Ya. Karpova.  
(Diffusion) (Polymers) (Gamma rays)

TIKHOMIROVA, N.S.; MALINSKIY, Yu.M.; KARPOV, V.L.

Study of the diffusion processes in some polymers. Part 4: Reversible changes in diffusion characteristics taking place under conditions of irradiation. Vysokom. soed. 2 no.9:1349-1359 S '60. (MIRA 13:9)

1. Nauchno-issledovatel'skiy institut plastmass i Fiziko-khimicheskiy institut im. L.Ya. Karpova.  
(Diffusion) (Gamma rays) (Polyethylene)

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S/190/60/002/009/006/019  
B004/B060

21.6200 also 2209, 2109

AUTHORS:

Tikhomirova, N. S., Malinskiy, Yu. M., Karpov, V. L.

TITLE:

Study of Diffusion Processes in Some Polymers. III. Irreversible Variations of the Diffusion Characteristics Due to the Action of Gamma Radiation of Co<sub>60</sub> on the Polymer

PERIODICAL:

Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 9,  
pp. 1335-1348

TEXT: The authors studied the dependence of the coefficient P of the permeability to gas, of the diffusion coefficient D, and of the solubility of helium and argon on the irradiation dose (up to 1250 Mrad) at 25, 40, 60, and 70°C for films of polyethylene (0.4 mm), polyamide 654/10 (0.01 mm), methylol polyamide 2/10 (0.012 mm), CKC-30 (SKS-30) rubber (0.4 mm), and polytetrafluoro ethylene (0.06 mm). Apparatus, preparation of the films, and method of measurement are described in a previous paper (Ref. 19). Experimental data are provided as follows: 1) For polyethylene: (Figs. 1, 2, Table 1) P and D for helium and argon as a function of the irradiation dose; Fig. 3: dependence of the degree of cross-linking on the dose; Fig. 4:

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